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(54) Title: ASSAY FOR ACETYLTRANSFERASES AND ACETYLTRANSFERASE SUBSTRATES

(57) Abstract: Methods of identifying an acetyltransferase substrate in a sample are provided. Also provided are methods of local-  
izing acetylation of an acetyltransferase substrate in a cell. Additionally, methods of labeling a protein substrate of an acetyltrans-  
ferase are provided, as are methods of assaying an acetyltransferase in a sample. Methods of quantifying acetyltransferase activity  
in a sample are further provided. Compositions provided include halo-acetyl-pantetheine, halo-acetyl-pantetheine with a label, and  
halo-acetyl-CoA with a label on the adenine of the CoA.



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